

WHAT IS CLAIMED IS:

1. A homogeneous, thermoreversible gel film comprising a film forming amount of a water soluble, thermoreversible alginate and optionally at least one of a plasticizer, a second film former, bulking agent, and a pH controlling agent.
2. The gel film of claim 1, wherein said second film former is at least one of a starch, starch derivative, starch hydrozylate, cellulose gum, kappa carrageenan; iota carrageenan, kappa-2 carrageenan, polymannan gums, pullulan, gellan, pectin, an alkyl cellulose ether or a modified alkyl cellulose ether and said plasticizer is at least one polyol.
3. The gel film of claim 1, wherein said alginate is sodium alginate, potassium alginate or ammonium alginate.
4. The gel film of claim 1, wherein said alginate is at least one of propylene glycol alginate or salts of said alginate and combinations thereof.
5. The gel film of claim 1, wherein said second film former is at least one of kappa carrageenan, kappa-2 carrageenan, iota carrageenan, polymannan gums, pectin and less than fully modified versions thereof and combinations thereof.

6. The film of claim 1, wherein said alginate is present in an amount of at least 10% of the total amount of film formers in the gel film.
7. The film of claim 1, wherein said alginate is sodium alginate, potassium alginate or propylene glycol alginate, and said film further comprises at least one of hydroxyethyl cellulose, starch, starch derivative, starch hydrozylate, sodium citrate, sorbitol, glycerin or water.
8. The film of claim 1 having a break force of at least 2,500 grams.
9. The film of claim 1 having a break force of at least 4,000 grams.
10. The film of claim 1, having a break force of at least 5,000 grams.
11. The film of claim 1, having a break force of at least 6,000 grams.
12. The film of claim 1 having a solids content of at least 50% by weight of the gel film.
13. The film of claim 1 having a solids content of at least 60% by weight of the gel film.

14. The film of claim 1 having a solids content of at least 70% by weight of the gel film.
15. The film of claim 1 having a solids content of at least 80% by weight of the gel film.
16. The film of claim 1 having a solids content of at least 90% by weight of the gel film.
17. The film of claim 1, wherein said plasticizer is at least one member selected from the group consisting of glycerin, sorbitol, maltitol, lactitol, solubilized oil and polyalkylene glycols; said second film former is at least one member selected from the group consisting of a starch, starch derivative, starch hydrozylate, cellulose gum, kappa carrageenan; iota carrageenan, kappa-2 carrageenan, polymannan gums, pectin, dextrans, pullulan, gellans, an alkylcellulose ether and a modified alkyl cellulose ether; said bulking agent is at least one member selected from the group consisting of microcrystalline cellulose, microcrystalline starch, starch, starch derivatives, inulin, and starch hydrozylates; and said polyvalent cation is at least one member selected from the group consisting of calcium, magnesium, aluminum and chromium.
18. The film of claim 1, wherein said alginate is the only film former in the gel film.

19. The film of claim 1, wherein said gel film contains a second film former selected from at least one of the group consisting of kappa carrageenan, kappa-2 carrageenan and iota carrageenan.

20. Soft capsules comprising capsule walls and an encapsulated substance, wherein said capsule walls comprise the films in any of claims 1-19.

21. The soft capsules of claim 20, wherein the capsule shell has a solids content of at least 50%.

22. The soft capsules of claim 20, wherein said encapsulated substance is at least one member selected from the group consisting of pharmaceuticals, vitamins, nutritional supplements, paintballs, pigments, agriculturals, cosmetics, flavorant or food.

23. A process for making the gel films in any of claims 1-19, comprising the steps of:

(i) heating, hydrating, mixing, solubilizing, and optionally de-aerating a composition of said alginate and optionally at least one of said plasticizer, said second film former, said bulking agent and said pH controlling agent in an apparatus providing sufficient shear, temperature and residence time to form a homogeneous, molten composition, wherein said temperature is at or above the solubilizing temperature of the molten composition; and

(ii) cooling said molten composition to or below the gelling temperature of the molten composition to form the gel film.

24. The process of claim 23, wherein said molten composition is fed directly into at least one of a mixer, pump or devolatilizer.
25. The process of claim 23, wherein said apparatus is a Ross mixer, extruder, Stephan processor, jet cooker or fluid mixing apparatus.
26. A process for making soft capsules of claim 20 containing the gel films in any of claims 1-19 comprising the steps of:
 - (i) heating, hydrating, mixing, solubilizing, and optionally de-aerating a composition of said alginate and optionally at least one of said plasticizer, said second film former, said bulking agent and said pH controlling agent in an apparatus providing sufficient shear, temperature and residence time to form a homogeneous, molten composition, wherein the temperature is maintained at or above the solubilizing temperature of the molten composition; and
 - (ii) making soft capsules directly from said molten composition or allowing said molten composition to cool to its gelling temperature or below and thereafter making soft capsules therefrom.
27. The process of claim 26, wherein said apparatus is a Ross mixer, extruder, Stephan processor, jet cooker or fluid mixing apparatus.

28. The process of claim 26 wherein said molten composition is fed directly into a mixer, pump or devolatilizer.
29. A solid form comprising a fill material encapsulated by the homogeneous, thermoreversible gel film in any of claims 1-19.
30. The solid form of claim 29, wherein said fill material is a powder, tablet, caplet, microcapsule or capsule.
31. The solid form of claim 29, wherein said solid form is a hard capsule.
32. The film of claim 1 having a polyvalent cation level of 5.0% or less based on the dry weight of the alginate in the gel film, wherein said polyvalent cation is not magnesium.
33. The film of claim 32 wherein said polyvalent cation level of 2.0% or less based on the dry weight of the alginate in the gel film and said polyvalent cation is not magnesium.
34. Soft capsules comprising capsule walls and an encapsulated substance, wherein said capsule walls comprise the films in any of claims 32-33.